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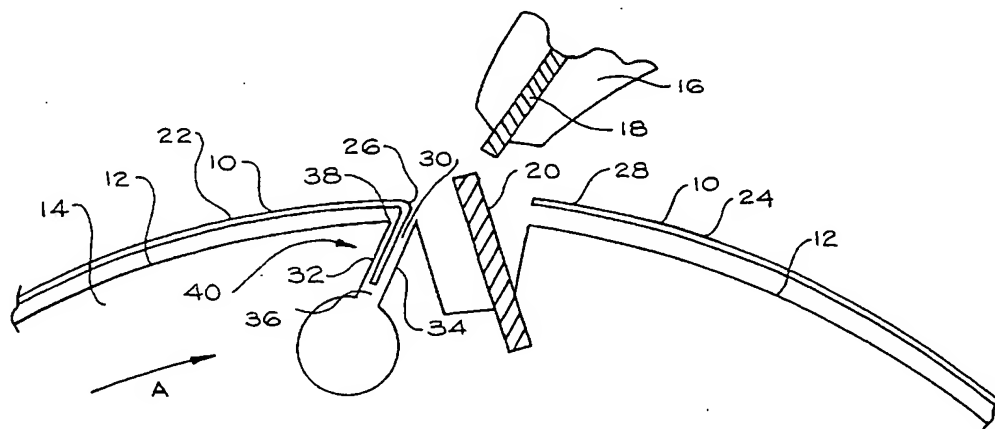
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: WEB RETENTION APPARATUS AND METHOD FOR CUTOFF BLADE



(57) Abstract: A web retention apparatus (40) and method for securing the edge of a severed web (26, 28) against movement or piling up during subsequent web operations. The invention preferably utilizes a vacuum aperture (30) which draws in and holds a portion (e.g., the edge) of a web (10) within the vacuum aperture (30) by a suction force created by a vacuum generator. The aperture (30) is preferably an elongated groove or slot located near the position at which the web (10) is cut, thereby permitting the web portion to lie near and be pulled into the vacuum aperture (30). The aperture (30) can have a throat (36) defined by one or more walls (32, 34) extending below the surface (12) in which the aperture (30) is located. The present invention finds particular applicability on a cutoff roll (14), where one or more cutoff blades (20) are mounted on a cutoff roll surface (12).

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/14378

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :B26D 7/06

US CL :83/24, 100

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 83/24, 100, 98, 345

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|--------------------------------|
| X | US 4,080,856 A (SHEARON) 28 March 1978, Figures 4-5, columns 3-4. | 1-6, 9-11, 13-18, 21-23, 25-31 |
| ---- | | ---- |
| Y | Figures 4-5, columns 3-4. | 7-8, 12, 19-20, 24 |
| X | US 4,041,816 A (SHEARON) 16 August 1977, Figure 4, columns 5-6. | 1-6, 9-11, 13-18, 21-23, 25-31 |
| ---- | | ---- |
| Y | Figure 4, columns 5-6. | 7-8, 12, 19-20, 24 |
| A | US 3,380,327 A (STEMMLER) 30 April 1968, Figure 4. | 1-31 |



Further documents are listed in the continuation of Box C.



See patent family annex.

| | |
|---|--|
| * Special categories of cited documents: | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "A" document defining the general state of the art which is not considered to be of particular relevance | "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "E" earlier document published on or after the international filing date | "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
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| "O" document referring to an oral disclosure, use, exhibition or other means | |
| "P" document published prior to the international filing date but later than the priority date claimed | |

Date of the actual completion of the international search

01 AUGUST 2000

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/14378

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---------------------|--|-----------------------|
| A | US 3,410,162 A (RUGGERI) 12 November 1968, Figure 8. | 1-31 |
| A | US 3,586,586 A (BERG) 22 June 1971, Figure 1. | 1-31 |
| A | US 3,709,077 A (TROGAN et al) 09 January 1973, Figure 4. | 1-31 |
| A | US 4,404,879 A (FROHWERK et al) 20 September 1983, Figure 4. | 1-31 |
| A | US 4,648,409 A (MATTEI) 10 MARCH 1987, Figure 2. | 1-31 |
| A | US 4,778,441 A (COUTURIER) 18 October 1988, Figure 1. | 1-31 |
| A | US 4,917,665 A (COUTURIER) 17 April 1990, Figure 1. | 1-31 |
| A | US 5,437,213 A (SCHULZ) 01 August 1995, Figures 1-2. | 1-31 |
| A | US 5,609,084 A (GRONBJERG) 11 March 1997, Figure 2. | 1-31 |
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Form PCT/ISA/210 (continuation of second sheet) (July 1998)*

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/14378

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Please See Extra Sheet.

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☒ No protest accompanied the payment of additional search fees.

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING

This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group I, claim(s) 1-25 are, drawn to an apparatus for retaining a web of material.

Group II, claim(s) 26-31 are, drawn to a method for holding a web of material.

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack Unity of Invention because they are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for more than one species to be searched, the appropriate additional search fees must be paid. The species are as follows:

Species A - The embodiment shown on Figure 2:

Species B - The embodiment shown on Figure 3.

The claims are deemed to correspond to the species listed above in the following manner:

Figure 2 - claims 11 and 23;

Figure 3 - claims 12 and 24.

The following claims are generic: 1-10, 13-22 and 25.

The inventions listed as Groups I-II do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the method of Group II can be practiced by another different apparatus such as an apparatus not requiring the special technical features of vacuum source set forth in Group I.

The species listed above do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: the species A lacks the same special technical features of Species B such as at least one wall defined by a surface of a blade.

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